

**Table 1. Status of ASTM , Canadian, and European about Testing Insulating Glass Units (IGUs) and IGU Seal Durability**

| <b>Status</b> | <b>Title of Standard</b> | <b>Title of Standard</b>  |         |
|---------------|--------------------------|---|---------|
| In Force      | ASTM E 546-88(1999)e1    | Standard Test Method for Frost Point of Sealed Insulating Glass Units   | U.S.    |
| In Force      | ASTM E 546-88(1999)e1    | Standard Test Method for Frost Point of Sealed IGUs in the Vertical Position  | U.S.    |
| In Force      | ASTM E 773-97            | Standard Test Method for Accelerated Weathering of Sealed Insulating Glass Units                                      | U.S.    |
| In Force      | ASTM E 774-97            | Standard Specification for the Classification of the Durability of Sealed IGUs  | U.S.    |
| In Force      | ASTM E 1887-97           | Standard Test Method for Fog Determination  | U.S.    |
| In Force      | CAN/CGSB 12.8            | Insulating Glass Units  | Canada  |
| In Force      | CAN/CSA A440-M           | Windows   | Canada  |
| In Force      | DIN 52 293               | Testing the Tightness of Gas-filled Insulating glazing units  | Germany |
| In Force      | DIN 52 344               | Test of Glass; Testing the Effect of Alternating, etc.  | Germany |
| In Force      | NF P 78-451              | Glazing and Mirrors, IGUs, Moisture Penetration Resistance Tests  | France  |
| In Force      | JIS R 3209               | Sealed Insulating Glass   | Japan   |
| Draft*        | ASTM E XXX               | New Standard Test Method for Insulating Glass Unit Performance  |         |
| Draft*        | ASTM E YYY               | New Standard Test Method for Testing Resistance to Fogging in IGUs  |         |
| Draft*        | ASTM E ZZZ               | New Standard Specification for IGU Performance and Evaluation   |         |
| Draft         | ASTM E XXXX              | New Standard Test Method for Estimating the Inert Gas Level in Sealed Insulating Glass Units Using an Oxygen Analyzer |         |
| Draft         | ASTM E AAA               | New Standard Test Method for Determining the Gases Present in Sealed Insulating Glass Units Using a Gas Chromatograph |         |

European Standards are Being Developed by the Technical Committee CEN/TC 129 Glass in Buildings of which Six Parts are Related to “Glass in Buildings - Insulating Glass Units.” These draft standards are now being circulated for comments.

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|---------|-------------|--|
| Draft** | prEN 1279-1 | Part 1: Generalities, Dimensional Tolerances and Rules for the System Description                        |
| Draft** | prEN 1279-2 | Part 2: Long Term Test Method and Requirements for Moisture Penetration                                  |
| Draft** | prEN 1279-3 | Part 3: Long Term Test Method and Requirements for Gas Leakage Rate and for Gas Concentration Tolerances |
| Draft** | prEN 1279-4 | Part 4: Methods of Test for the Physical Attributes of Edge Seals  |
| Draft** | prEN 1279-5 | Part 5: Evaluation of Conformity   |
| Draft** | prEN 1279-6 | Part 6: Factory Production Control and Periodic Tests  |

\* These new standards are being developed for N. America as harmonized insulating glass standards (HIGS) between those used in the U.S. and Canada with E-XXX, E-ZZZ, and E-YYY serving as modifications of E773-97, E-774-97, and E 1887-97, respectively. They have been balloted several times at the task group level and will be balloted at the E06.22 subcommittee and E6 committee levels in early 2001.

\*\* These draft standards, which are dated September 2000, are all in an advanced stage of development. Each part is not a stand-alone standard but the entire set of 1279-1 through –6 must be used collectively. A copy of these documents is available from R. Pitts at NREL.